

Title (en)

ILLUMINATING DEVICE AND LIQUID CRYSTAL DISPLAY DEVICE

Title (de)

BELEUCHTUNGSVORRICHTUNG UND FLÜSSIGKRISTALLANZEIGEVORRICHTUNG

Title (fr)

DISPOSITIF D'ÉCLAIRAGE ET DISPOSITIF D'AFFICHAGE À CRISTAUX LIQUIDES

Publication

**EP 2172699 A4 20110420 (EN)**

Application

**EP 08792175 A 20080804**

Priority

- JP 2008063978 W 20080804
- JP 2007260377 A 20071003

Abstract (en)

[origin: EP2172699A1] The backlight (2) (illumination device) in accordance with the present invention includes a spot-shaped light source (LED) (5) and a light guide unit (11) including a light guide (7) diffusing and surface-emitting a light from the light source. The light guide unit (11) includes in addition a substrate (4) to dispose and fixate the light source (5) and the light guide (7). Protruding sections (12) are provided on an incident face of the light from the light source (5) of the light guide (7) so as to protrude in a direction opposite to an incident direction of the light from the light source. Further, the light guide (7) is fixedly disposed on the substrate (4) by connecting the protruding sections (12) to the substrate (4). As a result, with the illumination device using the light source and the light guide, it is possible to achieve an illumination device with a higher light use efficiency and higher luminance homogeneity.

IPC 8 full level

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**G02B 6/0046** (2013.01 - EP US); **G02B 6/008** (2013.01 - EP US); **G02B 6/0091** (2013.01 - EP US)

Citation (search report)

- [X] WO 2005114273 A1 20051201 - OSRAM OPTO SEMICONDUCTORS GMBH [DE], et al
- [A] JP S5953703 U 19840409

Cited by

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